CLAIMS

1. An electrically variable power transmission comprising:

an input shaft;

a first electric power transfer mechanism, a second electric power transfer mechanism, an input clutch, an output clutch, and a planetary gearset having a first member, a second member, and a third member;

a transmission output shaft;

said first member being continuously connected with said first electric power transfer mechanism, said second member being continuously connected with said second electric power transfer mechanism;

said input clutch being selectively operable to interconnect said input shaft with said third member during a first range of operation and with said second member during a second range of operation; and

said output clutch being selectively operable to connect said second member with said output shaft during said first range of operation and to connect said third member with said output shaft during said second range of operation.

2. The electrically variable power transmission Claim 1, wherein the first member of said planetary gear set is a sun gear, the second member is a planet carrier, and the third member is a ring gear.

3. A powertrain for an automotive vehicle comprising:

an input shaft;

a first electric power transfer mechanism, a second electric power transfer mechanism, an input clutch, an output clutch, and a planetary gearset having a first member, a second member, and a third member;

a transmission output shaft;

said first member being continuously connected with said first electric power transfer mechanism, said second member being continuously connected with said second electric power transfer mechanism;

said input clutch being selectively operable to interconnect said input shaft with said third member during a first range of operation and with said second member during a second range of operation;

said output clutch being selectively operable to connect said second member with said output shaft during said first range of operation and to connect said third member with said output shaft during said second range of operation

an engine which is connected to the input of said transmission,

an electronic control unit connected to said first and second electric power transfer mechanisms of said transmission, and

an electric storage battery connected to said electronic control unit, capable of storing electrical energy from said electric power transfer mechanisms and capable of supplying power for said electric power transfer mechanisms.

4. The electrically variable power transmission defined in Claim 1 further wherein said first member of said planetary gearset is a ring gear, said second member is a planet carrier, and said third member is a sun gear.